

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

IXYS CORPORATION,

Plaintiff,

No. C 02-03942 MHP

v.

ADVANCED POWER TECHNOLOGY, INC.,

Defendant.

**MEMORANDUM AND ORDER RE:
DEFENDANT'S MOTION FOR
SUMMARY JUDGMENT OF
INVALIDITY**

AND RELATED COUNTERCLAIMS.

Plaintiff IXYS Corporation ("IXYS") filed this action against defendant Advanced Power Technology, Inc. ("APT"), alleging infringement of two U.S. patents, numbered 5,486,715 (the "'715 patent") and 5,801,419 (the "'419 patent"), that it holds on an improved design for power MOSFET devices. APT has counterclaimed for infringement of its patents, numbered 5,283,202 (the "'202 patent") and 5,262,336 (the "'336 patent"), which teach a design for diodes with lifetime control. The parties now come before the court upon APT's motion seeking summary adjudication that IXYS's '715 and '419 patents are invalid for anticipation. After having considered the parties' arguments and submissions, and for the reasons set forth below, the court rules as follows.

BACKGROUND¹

I. Technical Summary

Although the technology involved in this case will likely be reasonably familiar to frequent students or observers of patent law (particularly in this judicial District), to say nothing of engineers or technicians in

1 the field, a brief summary of the basic scientific background information necessary to understand the patents
2 at issue seems appropriate. These patents involve the use of semiconductors, materials which are neither
3 good conductors of electricity (such as metal) nor good electrical insulators (non-conductors, such as glass
4 or wood), but instead will conduct electricity reasonably well only under certain conditions. The typical
5 semiconductor, and the type employed here, involves a wafer of silicon (in which the atoms are arrayed in a
6 crystalline lattice structure) that has been infused or “doped” with trace amounts of other elements in order
7 to either add extra electrons to the lattice or to create “holes” (the absence of electrons) within the lattice
8 where electrons can be placed. The regions of the semiconductor that have been doped to add electrons
9 are called “N” regions, since these extra electrons represent negative charges; the regions that have been
10 doped to add “holes” are referred to as “P” regions, since these holes represent positive charges. Where
11 pure silicon (which is essentially glass or sand) would function as an insulator, these dopants allow the
12 silicon wafers in which they have been implanted to operate as partial conductors of electricity.

13 A transistor is a device that functions as an electronic—rather than a mechanical—switch. Every
14 transistor contains three operative regions: a source, a drain, and a gate. An electrical signal flows into a
15 transistor via the source, and is either allowed or prevented from flowing out through the drain by the
16 “gate,” which acts like its namesake; when the gate is “closed,” charge cannot flow to the drain, and when
17 the gate is “open,” charge is able to flow. Transistors are built by placing three oppositely doped regions
18 adjacent to one another (such as in a “PNP” configuration), with the middle region functioning as the “gate.”
19 There are several different mechanisms that can be employed to “switch” the gate, reversing its polarity and
20 allowing charge to flow, including directly applying a voltage to the gate itself. The transistors described in
21 IXYS’s ‘715 and ‘419 patents employ a different, well-known method to control the gate: they utilize a
22 strip of polysilicon and a strip of metal to create an electric field over the gate and switch the gate on or off
23 by modulating this field. This type of transistor is known generally as a “field effect transistor,” or “FET;”
24 the particular materials at use here classify this device as a “metal oxide semiconductor FET,” or
25 “MOSFET.”
26

27 The word “transistor” usually conjures up an image of the millions of microscopic devices, used in
28 every square inch of computer chips, through which flow only minute amounts of current. However, there

1 is a subclass of MOSFETs known as “power MOSFETs” that are used to switch and control large
2 amounts current in order to power and operate large mechanical devices, such as motors, computers, or
3 medical devices. At issue in this case are “high-frequency power MOSFETs,” which, as their name would
4 indicate, are intended to manage large currents at high frequencies. The improvement over prior art that
5 IXYS claims forms the crux of its patents is the addition of overlapping metallic layers, the first of which is
6 deposited on top of the gate polysilicon and strengthens the field used to operate the gate, and the second
7 of which forms two “buses” through which current can flow to the source and to the gate polysilicon.

8 Transistor fabrication involves the repeated deposition of one layer of material (a semiconductor,
9 insulator, or metallic conductor) upon another according to a pre-selected pattern. There are several
10 methods that are commonly utilized to define the locations in which a particular layer will be applied.
11 Transistor manufacturers may rely upon the natural geometry (the high and low points) of the transistor
12 layers that already exist, depositing subsequent layers only in locations that are exposed in some particular
13 manner. An alternative method is “mask photo-lithography,” a process that involves first depositing a layer
14 of material, followed by a layer of a photo-sensitive compound, and then removing unwanted sections by
15 exposing them to light while shielding desired areas with a “mask” that has been patterned according to the
16 design specifications.

17
18
19 II. Procedural History

20 Plaintiff IXYS Corporation and defendant Advanced Power Technology, Inc. are both
21 semiconductor manufacturing firms that do business in Santa Clara, California. IXYS filed suit against APT
22 on August 15, 2002, alleging that APT was infringing two related patents detailing an improved design for
23 “high-frequency power MOSFETs” held by IXYS. On October 1, 2002, APT counterclaimed against
24 IXYS for infringement of a patent it held that described an improved design for producing “lifetime control”
25 in semiconductor devices. On January 22, 2004, this court entered an order construing disputed terms in
26 those three patents. That same day, the court also authorized APT to amend its counterclaims to add a
27 claim that IXYS had infringed APT’s ‘336 patent. APT has now filed for summary judgment of invalidity
28 with respect to IXYS’s two patents.

1 III. Factual Background

2 APT's motion for summary judgment turns on the various generations of APT power MOSFET
3 products, their dates of invention and sale, and their relation to one another and to IXYS's patents.
4 IXYS's infringement allegations are directed at a panoply of APT products, viz., "(a) any and all Power
5 MOS 7® products or Power MOS V® (Generation 5) products with dual-layer metallization
6 manufactured, used, sold, or offered for sale by APT on or after August 15, 1996, and (b) *any and all*
7 *products manufactured, used, sold, or offered for sale by APT on or after August 15, 1996 that are*
8 *designed in substantially the same way, or function in substantially the same way, as APT 5018BLL*
9 [a Power MOS 7™ MOSFET]." Feeman Dec. Exh. 4, at 2 (Pl. Disclosure of Asserted Claims and
10 Preliminary Infringement Contentions) (emphasis added).

11 The predecessor to APT's MOS V and MOS VII devices is, unsurprisingly, APT's MOS IV line
12 of products, which includes the APT 208 and APT 526 devices. According to APT, all APT MOS IV
13 products, including the APT 208 and 526, are power MOSFETs that employ a "first metal/polysilicon
14 gate" and a layer of "second metal" through which current flows to the first metal gate and to the MOSFET
15 source. Tsang Dec. ¶ 54. APT marketed the APT 208 as early as January 1991, and a second
16 incarnation of the product (known internally as the "APT 208x") was sold from late 1991 until late 2001.
17 Id. at ¶ 13.² At that point, APT removed the 208x from the market and replaced it with MOS V
18 generation devices. Id. Meanwhile, APT tested and characterized the 526 during the summer and fall of
19 1993, and "data sheets were released to marketing on October 8, 1993, for dissemination to the public."
20 Id. at ¶ 14. The APT 526 was first sold on December 27, 1993, and APT currently still markets that
21 product.
22

23 During APT's production of the MOS IV line, IXYS's contemporaneous development of the
24 technology that would lead to the '715 and '419 patents was continuing apace. Dr. Nathan Zommer, the
25 inventor of those patents, states that by December 1992 he had created a power MOSFET that operated
26 at high speed. Zommer Dec. ¶ 10. Dr. Zommer sent a memorandum outlining that technology to a
27 potential customer on or about December 23, 1992, and produced an "Invention Disclosure Form"
28 describing the technology in detail on March 17, 1993. Id. ¶¶ 10-12 & Exh. B. Dr. Zommer later sent a

1 copy of this form to the law firm IXYS had retained to prosecute the forthcoming patent application. Id. ¶
2 13. IXYS filed the application that would eventually result in the issuance the '715 and '419 patents on
3 October 15, 1993. See Feeman Dec. Exh. 1.

4
5 LEGAL STANDARD

6 I. Summary Judgment

7 Summary judgment is proper when the pleadings, discovery and affidavits show that there is “no
8 genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law.”
9 Fed. R. Civ. P. 56(c). Material facts are those which may affect the outcome of the case. Anderson v.
10 Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). A dispute as to a material fact is genuine if there is
11 sufficient evidence for a reasonable jury to return a verdict for the nonmoving party. Id. The moving party
12 for summary judgment bears the burden of identifying those portions of the pleadings, discovery and
13 affidavits that demonstrate the absence of a genuine issue of material fact. Celotex Corp. v. Cattrett, 477
14 U.S. 317, 323 (1986). On an issue for which the opposing party will have the burden of proof at trial, the
15 moving party need only point out “that there is an absence of evidence to support the nonmoving party’s
16 case.” Id.

17
18 Once the moving party meets its initial burden, the nonmoving party must go beyond the pleadings
19 and, by its own affidavits or discovery, “set forth specific facts showing that there is a genuine issue for
20 trial.” Fed. R. Civ. P. 56(e). Mere allegations or denials do not defeat a moving party’s allegations. Id.;
21 see also Gasaway v. Northwestern Mut. Life Ins. Co., 26 F.3d 957, 960 (9th Cir. 1994). The court may
22 not make credibility determinations, Anderson, 477 U.S. at 249, and inferences to be drawn from the facts
23 must be viewed in the light most favorable to the party opposing the motion. Masson v. New Yorker
24 Magazine, 501 U.S. 496, 520 (1991).

25 The Federal Circuit applies the same standard for summary judgment. See, e.g., Southwall Techs.
26 Inc. v. Cardinal IG Co., 54 F.3d 1570, 1575 (Fed. Cir. 1995); Barmag Barmer Maschinenfabrik AG v.
27 Murata Machinery, Ltd., 731 F.2d 831, 835 (Fed. Cir. 1984). The Federal Circuit has repeatedly held
28 that summary judgment is as appropriate in patent cases as in any other type of case. See, e.g., Paragon

1 Podiatry Lab., Inc. v. KLM Lab., Inc., 984 F.2d 1182, 1190 (Fed. Cir. 1993); Hodosh v. Block Drug
2 Co., 786 F.2d 1136, 1141 (Fed. Cir. 1986).

3
4 II. Invalidity For Anticipation

5 35 U.S.C. section 102 provides, in relevant part:

6 A person shall be entitled to a patent unless --

7 . . .

8 (b) the invention was patented or described in a printed publication in this or a
9 foreign country or in public use or on sale in this country, more than one year prior
to the date of the application for patent in the United States, or

10 . . .

11 (g)(2) before the applicant's invention thereof the invention was made in this country
by another inventor who had not abandoned, suppressed, or concealed it...³

12 35 U.S.C. § 102(b), (g). A patent is presumed to be valid. See 35 U.S.C. § 282. In order to establish
13 invalidity, the attacker bears the burden of proof by clear and convincing evidence. See American Hoist &
14 Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1360 (Fed. Cir. 1984).

15 Invalidity for anticipation requires that all of the elements and limitations of the challenged claim be
16 found within a single prior art reference. Scripps Clinic & Research Foundation v. Genetech, Inc., 927
17 F.2d 1565, 1576 (Fed. Cir. 1991). The Federal Circuit has stated that invalidity for anticipation requires
18 that there be no differences between the claimed invention and the reference disclosure, as viewed by a
19 person of ordinary skill in the field of the invention; this is known as the requirement that there be “identity”
20 between the patent and the anticipatory device. Id. The anticipatory reference must also be enabling. Id.
21 at 1578. Prior art patent references are presumed to be enabled. See In re Sasse, 629 F.2d 675, 681
22 (C.C.P.A. 1980).

DISCUSSION

I. The Evans Cooling Doctrine

APT argues at the outset that it need not prove identity of invention between its 208 device and IXYS's patents in order to succeed on its motion for summary judgment of invalidity. According to APT, IXYS's allegations of infringement against any and all products manufactured, used, sold, or offered for sale by APT... that are designed in substantially the same way, or function in substantially the same way" as APT's MOS VII line operates as an allegation of infringement against APT's MOS IV line of products, several of which constitute prior art to the APT patents. Feeman Dec. Exh. 4, at 2. Citing Evans Cooling Sys., Inc. v. GMC, 125 F.3d 1448 (Fed. Cir. 1997), and its limited progeny, APT argues that IXYS's accusation of infringement serves to fulfill APT's own burden of demonstrating identity by clear and convincing evidence; according to APT, it need only admit infringement and IXYS will be undone by the very fact of its own claims.

Evans Cooling, and the two cases that follow it, lend some credence to this line of argument. In Evans Cooling, the defendant (General Motors) had marketed the allegedly infringing device (the "LT1 engine") prior to the critical date and defended itself on the grounds that the patent was therefore invalid. The court held that "[a]lthough GM bore the burden of proving that the LT1 engine embodied the patented invention or rendered it obvious for purposes of the summary judgment motion, this burden is met by Evans' allegation, forming the sole basis for the complaint, that the LT1 engine infringes." Evans Cooling, 125 F.3d at 1451. This final factual predicate, viz., that no viable action existed unless Evans could prove infringement by the LT1 engine, was particularly important. The Evans court itself noted that "[t]his is not the typical case where the patentee has placed some device on sale prior to the critical date and the accused infringer must demonstrate that this device actually embodied or rendered obvious the patented invention. Here, the entire basis of the lawsuit is Evans'—the patentee's—contention that the LT1 engine—the device that was put on sale—contains a cooling system that infringes." Id.; see also Vanmoor v. Wal-Mart Stores, Inc., 201 F.3d 1363, 1366 (Fed. Cir. 2000) ("As was the case in Evans Cooling, the entire basis of the patent infringement claim is Vanmoor's (the patentee's) contention that the accused cartridges infringe the '331 patent."); Benedict v. General Motors Corp., 184 F. Supp. 2d 1197, 1200

(N.D. Fla. 2002) (“When a patent holder’s entire claim is that an accused product infringes the patent... no further showing of identity of the patented and accused products is required.”).

This rule made sense in the context in which it was developed. In Evans Cooling, there existed no logical space between plaintiff’s infringement allegation and defendant’s invalidity defense; the facts could not support one without identically buttressing the other. The court’s conclusion that the infringement claim itself fulfilled defendant’s burden of demonstrating identity, see Scripps, 927 F.2d at 1576, served principally to truncate litigation that was logically doomed to failure. In the instant case, however, the logical connection is not so decisive. IXYS has not directly alleged infringement by the APT 208, but rather has asserted its claim against (a) any and all Power MOS 7® products or Power MOS V® (Generation 5) products with dual-layer metallization manufactured, used, sold, or offered for sale by APT on or after August 15, 1996, and (b) any and all products manufactured, used, sold, or offered for sale by APT on or after August 15, 1996 *that are designed in substantially the same way, or function in substantially the same way*, as APT 5018BLL [a Power MOS 7™ MOSFET].” Feeman Dec. Exh. 4, at 2 (emphasis added). IXYS has never claimed that the APT 208 infringes its patent; only APT has offered that asseveration.⁴

In effect, APT has endeavored to transform a substantive rule into one of mere form in pleading. The Evans Cooling and Vanmoor plaintiffs held no viable causes of action for infringement unless they could prove infringement of devices that were on sale before the respective critical dates; artful pleading could not have rescued their claims as the substance of their allegations implicated only prior art. Evans Cooling, 125 F.3d at 1451; Vanmoor, 201 F.3d at 1366. In the present case, by contrast, APT seeks to exploit IXYS’s decision to employ broad language in its pleadings (that may or may not implicate the APT 208 and 526) without reference to the substantive merits of the infringement claims that do exist. The logical nexus that existed between infringement and invalidity in Evans Cooling is simply not present here. The court is loath to convert Evans Cooling’s atypical—yet substantive—rule into merely a clever pleadings snare. Where a plaintiff may succeed on its claim without proving that the allegedly “on sale” product itself infringes, granting summary judgment of infringement based purely upon what defendant claims is an accusation of a related product is inappropriate. Cf. Process Resources Corp. v. Delta Air Lines, Inc.,

2000 WL 145114, at *7 (S.D.N.Y. 2000) (refusing to apply Evans Cooling where plaintiff had accused an on-sale product in a prior lawsuit, since plaintiff's present suit did "not rest upon the allegation that the product allegedly offered for sale infringes").

At bottom, APT's proposed interpretation of the Evans Cooling doctrine would relieve it of the necessity of showing identity between the 208 and the IXYS patents and force APT merely to demonstrate that one of its products is "designed in substantially the same way, or function[s] in substantially the same way" as another of its products. Feeman Dec. Exh. 4, at 2. This cannot be what the Federal Circuit intended, for it would strip control of the lawsuit from the plaintiff in contravention of the very factor (the plaintiff's election to pursue a claim of infringement against the on-sale device) motivating the Evans Cooling decision. Evans Cooling, 125 F.3d at 1451. The court holds that because IXYS's success in proving infringement does not rest entirely upon demonstrating that a previously on-sale device infringes its patent, application of the Evans Cooling doctrine is improper here. APT must still prove anticipation by identity.

II. Anticipation by the APT 208 and 208x

IXYS alleges that APT has not proven "identity," as required under the doctrine of anticipation, because the APT 208/208x does not contain three elements found within the claims of its patents. (By implication, IXYS admits for the purposes of this motion that the APT device satisfies the remaining claim elements.) The court will consider each of these elements in turn.

A. "A second metallization layer... overlying... said insulating layer" ('715 patent, claims 1 and 23; '419 patent, claims 1 and 11)

The principal subject addressed in the court's construction of these claims was whether the second metallization layer must overlie the "entirety" of the insulating layer, or whether it need only overlie "a portion" of the insulating layer. In its claim construction order (which looked first at this phrase as found in claim 1 of the '715 patent), the court rejected IXYS's attempt to read the modifier "a portion" into the claim language, implicitly construing the claims to require that the second metallization layer overlie the entirety of the insulating layer. Claim Construction Order, at 17-18. Having answered this question with regard to claim 1 of the '715 patent, the court went on to apply the same logic to the similar language found

in claim 23 of the ‘715 patent and claims 1 and 11 of the ‘419 patent. See id. at 20-21. However, the court mistakenly included the phrase “a portion” in its construction of this term as found in claim 23 of the ‘715 patent and claims 1 and 11 of the ‘419 patent. This was simply a typographical error, belied by the fact that the court arrived at these later constructions “[p]er the definitions of terms already settled above.”⁵

In addition, the court believed that its discussion of this claim language—and the conclusion it reached—made clear the fact that the second metallization layer must overlie *the entire* insulating layer. Neither party initially argued for the inclusion of the term “entire” in the claim construction, but it appears that the inclusion of that term is necessary to avoid further confusion or attempts to re-litigate this issue. The court hereby amends its claim construction order such that the relevant claim language reads as follows.

1. “A second metallization layer comprising a gate bus and a source bus overlying at least said insulating layer” (‘715 patent, claim 1)

“A second metallization layer, including a source bus and a gate bus that are not in electrical contact, overlying at least the entire insulating layer. The source bus is a conductor used to transmit an electrical signal or power to the source regions. The gate bus is a conductor used to transmit an electrical signal or power to the gate.”

2. “A second metallization layer comprising a gate bus overlying said insulating layer” (‘715 patent, claim 23; ‘419 patent, claim 11)

“A second metallization layer which overlies the entire insulating layer and includes a gate bus. The gate bus is a conductor used to transmit an electrical signal or power to the gate.”

3. “Forming a second metallization layer overlying at least said insulating layer (including a bus line)” (‘419 patent, claim 1)

“Forming a second metallization layer overlying at least the entire insulating layer. This second metallization layer includes a bus line, which is connected to the first metallization layer through an opening in the insulating layer.”

APT states in conclusory fashion that “the second metal layer in the APT 208 overlies the insulating layer.” Def. Mot., at 13. Despite this categorical affirmation, however, APT has not put forth sufficient evidence to indicate that the APT 208’s second metallization layer does, in fact, overlie the entirety of the insulating layer. APT references two figures, reproduced in its moving papers, that display cross-sectional slices of its device and appear to show the second metallization layer overlying the insulating layer in its entirety, as required by the claim language. See id. at 11, 14; see also Tsang Dec. ¶¶ 51-53. However, these photos indicate only that the second metallization layer completely overlies the insulating layer at those

particular locations, not across the device as a whole. There is no reason to extrapolate from those figures the conclusion that the second metallization layer extends to every corner of the device and thus overlies the insulating layer completely.

To establish identity, APT must put forth a “top” view of the device that displays second metal overlying the entirety of the insulating layer (and contains no areas in which the insulating layer “peeks through”), or some equivalent evidence. It has failed to do so, and the pictures provided by APT indicate to the contrary. For instance, APT’s “Figure 2” exhibits a top view of the 208 that shows a series of source pads and a main gate pad overlying the remaining layers of the device. *Id.* at 13. APT has labeled these source and gate pads as the “second metallization,” and according to this figure they overly at most a small portion of the device. *See id.*⁶ In its reply brief, APT admits as much, explaining that “in every APT device the second metal is etched back to form gate bus and source bus regions that do not cover anything approaching the entire insulating layer.” Def. Rep., at 5:14-15 (citing Tsang Dec. ¶ 43). In light of these facts, summary judgment on invalidity is improper. *See Schumer v. Laboratory Computer Systems, Inc.*, 308 F.3d 1304, 1315-16 (Fed. Cir. 2002) (“Evidence of invalidity must be clear as well as convincing.”).⁷

B. “Source Bus” (‘715 patent, claim 1)

Despite the fact that the court has already denied APT’s motion for invalidity on the grounds of anticipation by the APT 208 because the second metal in that device does not overly the entirety of the insulating layer, in the interests of completeness the court will evaluate the remainder of the arguments IXYS has proffered to distinguish its patents from the APT 208.

IXYS contends that the “source pads” found on the top layer of the APT 208 do not—separately or in concert—constitute a “source bus” as required by claim 1 of the ‘715 patent. IXYS does not dispute that these source pads are indeed “conductor[s] used to transmit an electrical signal or power to the source regions” as specified in the claim construction. Claim Construction Order, at 20. Rather, IXYS alleges that the claim language requires that “the bus conductor necessarily must overly at least the insulating layer.” Pl. Opp., at 13-14. IXYS completes its syllogism by concluding that *current must flow through the portion of the source pad that overlies the insulating layer* since the bus—as a “conductor used to transmit an electrical signal”—exists only in the region through which current flows. *Id.* According to IXYS, the

portion of the source pad through which current flows overlies only the first metallization layer (via the metal “vias” connecting the two metal layers), not the insulating layer. Blanchard Dec. ¶¶ 17-23.

Regardless of whether IXYS is correct in this assertion,⁸ its argument rests upon a claim limitation that does not exist. The court construed this claim to require “[a] second metallization layer, including a source bus and a gate bus that are not in electrical contact, overlying at least the insulating layer.” Claim Construction Order, at 20. This construction requires that the second metallization layer overlie the entirety of the insulating layer, *and* that it must include a source bus and a gate bus, *not* that the source bus and gate bus *themselves* must overlie the insulating layer.⁹ The setting off of the interior clause (“including a source bus and a gate bus that are not in electrical contact”) from the rest of the phrase by commas should have alerted IXYS to this fact. APT has succeeded in establishing identity between the 208 and this claim element by clear and convincing evidence.

C. “High Frequency Power MOSFET” (‘715 patent, claim 23)

IXYS alleges that the APT 208 is not a “high frequency power MOSFET” as required by claim 23 of the ‘715 patent. The court has interpreted this claim language as “[a] power MOSFET device which operates between 1 Mz and 900 Mz,” and further clarified that a “device that ‘operates’ in a certain frequency range is one that ‘functions properly’ or ‘functions as intended’ within that range.” Claim Construction Order, at 6. To demonstrate the 208 meets this limitation, APT ran a series of tests on a device that it certifies as “representative of 208 characteristics in general.” Tsang Dec. ¶ 66. According to APT’s data, the 208 “successfully switch[ed]” 200 V and 40 A at frequencies as high as 1.22 MHz, results which APT believes indicate that the 208 functioned properly at those frequencies. Tsang Dec. ¶ 68 & Exh. 4, at 17362.¹⁰

IXYS does not dispute APT’s analysis of these test results or argue that they fail to demonstrate that the APT 208 operates properly at frequencies above 1 Mz. Instead, IXYS points to the APT 208’s data sheet, which—as even APT admits—describes the typical switching speed of the 208 as .91 MHz. Tsang Dec. ¶ 63 & Exh. 9, at 15958-59. IXYS claims that this discrepancy causes APT’s proof to fall short of the “clear and convincing” standard for invalidity. See Schumer, 308 F.3d at 1315-16. Despite IXYS’s protestations, however, no meaningful inconsistency exists here. The APT data sheets describe the

1 typical values at which the 208 operates and the performance characteristics according to which it was
2 marketed; while this frequency range might be optimal for that device, it is certainly not exclusive. Since the
3 208 appears to function properly even when driven at higher frequencies, see Tsang Dec. ¶ 68, it qualifies
4 as a “high frequency power MOSFET” according to the construction of IXYS’s claim language.
5

6 II. Anticipation by the APT 526

7 Even if APT were to succeed in demonstrating by clear and convincing evidence that the APT 526
8 constitutes prior art to the ‘715 and ‘419 patents (an issue that IXYS vigorously disputes), APT must still
9 prove identity between that device and IXYS’s patents. Scripps, 927 F.2d at 1576. APT has not alleged
10 that the 526 is distinct from the 208/208x in any manner significant to this analysis, and IXYS has again
11 argued that the APT 526 does not meet the “second metallization layer... overlying at least said insulating
12 layer” claim limitation.¹¹ See ‘715 patent, claims 1 and 23; ‘419 patent, claims 1 and 11. APT has offered
13 no evidence to indicate that the 526 device’s second metallization layer completely overlies its insulating
14 layer. Indeed, IXYS’s expert, Dr. Blanchard, has calculated that the second metallization layer overlies
15 only 46.14% of the 526’s insulating layer. Blanchard Dec. ¶ 13. The court thus finds that APT has not
16 proven identity between the 526 and IXYS’s ‘715 and ‘419 patents by clear and convincing evidence and
17 denies its motion for summary judgment of invalidity on those grounds.
18

19
20 CONCLUSION

21 For the reasons set forth above, the court DENIES defendant’s motion for summary judgment.

22 IT IS SO ORDERED.

23 Dated: March 18, 2004

24 /s/_____
25 MARILYN HALL PATEL
26 Chief Judge
27 United States District Court
28 Northern District of California

ENDNOTES

1. The background facts are drawn from the parties' moving papers, unless otherwise noted.
2. IXYS argues that the sales record cited by Dr. Tsang in support of this statement never mentions a device labeled "208x," and points out that Dr. Tsang, as Vice President of Engineering and Research and Development, is not the typical keeper of records for such a document. However, Dr. Tsang has stated that he "keep[s] abreast of product sales to assess technology trends and customers' needs and to direct APT's R&D efforts." Tsang Rebuttal Dec. ¶ 3. By consequence, there is every reason to believe that he had personal knowledge of the sales of this product (as well as of the nomenclature used to describe it within APT).
3. This statutory section referred to "another," rather than "another inventor," when IXYS originally filed the applications that would become the '715 and '419 patents. The Federal Circuit has stated that this change is insignificant. See Dow Chemical Co. v. Astro-Valcour, Inc., 267 F.2d 1334, 1340 (Fed. Cir. 2001).
4. After the filing of APT's motion, IXYS amended its infringement contentions, which now explain that "IXYS does not accuse of infringement any of APT's alleged 205, 208, 208x, or 526 devices." Feeman Dec. Exh. 8, at 2.
5. The parties seem generally to have been aware that the inclusion of this language was a simple typographical error. See, e.g., Def. Mot., at 16:22-23 (stating that the court has construed claim 23 of the '715 patent "consistent with the language of claim 1, but without the requirements related to a source bus."); Pl. Opp., at 3:25 ("[T]he Court refused to construe the claim as requiring that only a 'portion' of the second metallization layer must overlie the insulating layer."). Indeed, the requirement that the second metallization layer must overlie the entirety of the insulating layer was APT's argued-for construction.
6. IXYS has gone so far as to quantify this overlay, announcing that the second metallization layer covers less than 2.5% of the device's insulating layer. Blanchard Dec. ¶ 14. It is not necessary for the court to delve into the particulars of IXYS's calculation and determine whether the method employed by Dr. Blanchard was sound, because the second metallization surely does not overlie the entirety of the insulating layer as required by the language of the claims.
7. At oral argument, APT averred that although the second metallization layer of a *completed* 208 device does not overlie the entire insulating layer, there exists an intermediate step (before the second metal has been fully etched) at which it does overlie all of the insulating layer. APT argued that the 208 thus meets at least the limitation contained in claim 1 of the '419 patent (a method claim), since that claim requires only "forming a second metallization layer overlying at least said insulating layer." '419 patent, 7:66-67. APT has not proffered anything approaching "clear and convincing evidence" in support of this argument, and so it is likewise rejected.
8. IXYS's expert admits that the placement of the bonding wire (connecting the source pad to the outside world) plays a significant role in determining the part of the source pad through which current will flow. Blanchard Dec. ¶ 20. Thus, if APT were to place its bonding wire towards the outside edge of the source

1 pad, current might indeed flow through the sections of the pad that overly the insulating layer. The
2 placement of bonding wire is not discussed in any of the patents or in the specifications of APT's allegedly
3 prior art devices. In addition, IXYS relies upon a rather facile explanation of the path of current flow, one
4 that may not be correct under current circumstances. See Shenai Dec. ¶¶ 14-30.

5 9. Furthermore, it is certainly not the case that the second metallization layer may consist *only* of a source
6 bus and a gate bus.

7 10. IXYS objects that this portion of Dr. Tsang's declaration constitutes inadmissible hearsay and thus
8 should be disregarded by the court. IXYS is indeed correct that Dr. Tsang's statements are hearsay for the
9 purposes for which they are offered, since Dr. Tsang admits that he was not present when the tests were
10 conducted and did not participate in recording the results. Tsang Rebuttal Dec. ¶ 8; see also Fed. R. Evid.
11 802. However, Dr. Tsang has served as Vice President for Engineering and Research Development for
12 APT since 1987, and thus there is every reason to believe that he is the keeper of these types of records.
13 See Tsang Dec. ¶ 1. IXYS has not suggested otherwise. Thus, where Dr. Tsang has produced valid,
14 presumptively admissible documentary support for his hearsay statements, the court will rely upon that
15 documentation in assessing the truthfulness and reliability of APT's stated position.

16 11. IXYS has also argued that the 526 lacks a "gate bus" as required by claims 1 and 23 of the '715
17 patent and claim 11 of the '419 patent. IXYS advances this argument on the same grounds as its previous
18 assertions regarding the APT 208's lack of a "source bus," and the court rejects it along the same lines.
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